

**Remarks**

Claims 1-28 are pending. Claims 16 and 24-26 have been amended. More specifically, claims 16 and 26 have been amended to correct a typographical error. No new matter has been added and the applicants respectfully submit that the amendment in no changes the scope of coverage of claims 16 and 26.

**In the Specification**

The Examiner notes that “the disclosure is objected to because . . . FIG. 3f on page 7 under the Description of Drawings is mentioned in the specification but the actual figure is not in the drawings.” Office Action of October 19, 2004, p. 2, ¶ 1.

The applicants respectfully submit that Figure 3f was included with the application as filed. As evidence of this fact, the applicants have attached a copy of Figure 3f that was downloaded and printed from the Image File Wrapper (IFW) for the present application on the Private PAIR system. The undersigned personally downloaded and printed the attached copy of Figure 3f on November 22, 2004. Please note that the copy of Figure 3f appears to include a stamp/imprint from the USPTO reading “09898920.070201”. Accordingly, the applicant respectfully submits that no further correction related to Figure 3f is required.

The specification has been amended as shown above to include the serial number for a referenced pending patent application. No new matter has been added.

**Rejection of Claims under 35 U.S.C. § 101**

Claims 24-26 are rejected under 35 U.S.C. §101 because the claimed invention is directed to non-statutory subject matter. In response, claims 24-26 have been amended to address the Examiner’s rejection.

**Rejection of Claims under 35 U.S.C. § 102/103**

Claims 1-5, 8, 13-16, 19, and 24-28 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Mor et al., U.S. Patent Application Publication No. 2002/0018481 (Mor) and RFC 2892, which is incorporated by reference in Mor. Claims 6, 7, 9, 10, 17, 18, 20, and 21 stand rejected under 35 U.S.C. § 103 as being unpatentable over Mor in

view of Ebersole, U.S. Patent No. 4,982,400. Claims 11, 12, 22, and 23 stand rejected under 35 U.S.C. § 103 as being unpatentable over Mor in view of Ebersole, and further in view of in view of Friedman, U.S. Patent No. 5,949,788. The applicants respectfully traverse these rejections.

As an initial matter, the applicants respectfully submit that the rejection of claims 1-5, 8, 13-16, 19, and 24-28 under 35 U.S.C. § 102(e) is inappropriate because the rejection is based in part on disclosure material not in Mor. MPEP § 2136.02 makes clear that a reference forming the basis for a rejection under § 102(e) must itself contain the subject matter relied on in the rejection. More specifically, the section states:

When a U.S. patent, a U.S. patent application publication, or an international application publication is used to reject claims under 35 U.S.C. 102(e), the disclosure relied on in the rejection must be present in the issued patent or application publication.

Because the application of Mor and RFC 2892 together in a § 102(e) rejection is inappropriate, the applicants respectfully submit that independent claims 1, 4, 16 and 24-28 are allowable.

Additionally regarding independent claims 1, 24, and 27, the applicants respectfully submit that Mor and RFC 2892, taken alone or in combination, neither teach nor suggest a method of initializing a node in a network including:

. . . connecting the node to each of the first and second rings;  
 setting a locally significant ring identifier for each of the first and second rings without concern for the ring identifier established by any other node in the network for either of the two rings . . . [and]  
 determining routing decisions for one or more packets received at the node along each of the first and second rings using the locally significant identifiers associated with a node that sent the packets.

as required by independent claim 1, and generally required by independent claims 24 and 27.

Regarding the claimed “connecting the node,” the Examiner merely refers to paragraph 0024 of Mor which states:

a plurality of nodes, mutually connected by the segments in a ring so that the communication traffic can traverse the ring in either of first and second, mutually-opposing directions of communication.

Thus, while Mor may disclose that nodes are connected by segments in a ring, Mor neither teaches nor suggests the process of connecting the node to each of the first and second rings.

Regarding the claimed “setting a locally significant ring identifier,” the Examiner states:

. . . FIG. 1 of Mor; wherein the ring is attached locally to nodes A-D and the ring identifier is significant only to those attached nodes and insignificant to the other nodes attached to the Subnet . . . page 15, section 4.2.2 of RFC 2892; wherein each node sets a ring indicator value of 0 or 1 to the usage packet, control packet, and topology packet after the Time to Live (TTL) field without concern for the ring identifier established by the other nodes . . . (Office Action of October 19, 2004, p. 3, bottom, through page 4, top)

The applicants respectfully disagree.

While Figure 1 of Mor does label each of the four nodes 22 with a different letter A-D, nothing in the figure and nothing cited by the Examiner teaches or suggests “setting a locally significant ring identifier.” Moreover, there is nothing taught or suggested in Mor that supports the Examiner’s contention that “the ring identifier is significant only to those attached nodes and insignificant to the other nodes attached to the Subnet,” and the Examiner points to no such portion of the reference.

As for the portion of the claim limitation requiring setting identifiers “without concern for the ring identifier established by any other node in the network for either of the two rings,” the Examiner’s reference to RFC 2892 fails to teach or suggest the limitation. Section 4.2.2 (which falls under Section 4.2, “Generic Packet Header Format”) states:

#### 4.2.2. Ring Identifier (R)

This single bit field is used to identify which ring this packet is designated for. The designation is as follows:

TABLE 1. Ring Indicator Values

Outer Ring	0
Inner Ring	1

Thus, section 4.2.2 merely describes aspects of the packet header, and how it indicates on which ring a packet is traveling. Nothing is taught or suggested about the manner in which a locally significant ring identifier is selected at a node in a network.

Regarding the claimed “determining routing decisions,” the Examiner refers to paragraph 0030 of Mor which states:

FIG. 2 is a flow chart that schematically illustrates a method for assigning resources to nodes 22 and updating resource assignments, in accordance with a preferred embodiment of the present invention. At start-up of the network, each of the nodes learns the topology of ring network 20, at a topology learning step 30. This step is preferably carried out using the mechanism provided for this purpose by SRP, as described in the above-mentioned RFC 2892. The step is preferably repeated periodically in order to track changes in the ring. In addition, the nodes build routing tables for the overall network (including the subnets that are outside the ring network), at a route learning step 32. The routing tables are preferably built using the above-mentioned OSPF protocol, or alternatively using other suitable protocols known in the art, such as the Routing Information Protocol (RIP), described by Malkin in IETF RFC 2453. This RFC document, which is available at [www.ietf.org/rfc.html](http://www.ietf.org/rfc.html), is incorporated herein by reference. At this stage, nodes 22 also learn forwarding information within ring network 20, relating the MAC addresses of the nodes to their IP addresses, typically using local area network (LAN) protocols known in the art. Examples of such protocols include the Address Resolution Protocol (ARP), described by Plummer in RFC 826, and the Reverse Address Resolution Protocol (RARP), described by Finlayson et al., in RFC 903. These documents, available at the above-mentioned Web address, are also incorporated herein by reference.

Thus, although the cited portion of Mor describes, *inter alia*, building and using a routing table, the cited portion of Mor neither teaches nor suggests that the routing table “uses the locally significant identifiers associated with a node that sent the packets”.

Accordingly, independent claims 1, 24, and 27 are allowable over Mor and RFC 2892.

Regarding independent claims 4, 25, and 28, the applicants respectfully submit that Mor and RFC 2892, taken alone or in combination, neither teach nor suggest a method of initializing a node in a network including:

... connecting the node to each of the first and second rings;

determining a ring identifier for each of the first and second rings coupled to the node after connection . . . [and]

determining routing decisions for one or more packets received at the node along each of the first and second rings using the ring identifier information.

as required by independent claim 4, and generally required by independent claims 25 and 28.

Regarding the claimed “connecting the node,” the Examiner merely refers to paragraph 0024 which has been quoted above. As noted above, Mor may disclose that nodes are connected by segments in a ring, but Mor neither teaches nor suggests the process of connecting the node to each of the first and second rings.

Regarding the claimed “determining a ring identifier,” the Examiner refers to paragraph 0029 of Mor which states:

FIG. 1 is a block diagram that schematically illustrates an IP ring network 20, in accordance with a preferred embodiment of the present invention. Network 20 comprises nodes 22, which are connected by links 24 labeled S1 through S4. Each node can communicate with every other node over either a clockwise ring 26 or a counterclockwise ring 28 around the ring, indicated respectively by arrows adjacent to node A. Following SRP convention, these two paths are identified respectively as an outer ring and an inner ring, each of which is made up of ring segments corresponding to the physical links between the nodes. Typically, each of the nodes also links the ring to a respective subnet, which may be of substantially any topology known in the art. When node A, for example, receives a data flow from its respective subnet, which is destined for the subnet of node C, node A determines whether to transmit the flow over ring 26 or ring 28, using the method described hereinbelow.

The applicants respectfully disagree.

While the referenced paragraph does describe the links between nodes as being labeled S1 through S4, and indicate that rings identified respectively as an outer ring and an inner ring, Mor neither teaches nor suggests the operation of determining a ring identifier for each of the first and second rings coupled to the node after connection.

Regarding the claimed “determining routing decisions,” the Examiner refers to paragraph 0030 of Mor as quoted above. As noted above, although the cited portion of

Mor describes, *inter alia*, building and using a routing table, the cited portion of Mor neither teaches nor suggests that the routing table uses the claimed ring identifier information.

Accordingly, independent claims 4, 25, and 28 are allowable over Mor and RFC 2892.

Regarding independent claims 16 and 26, the applicants respectfully submit that Mor and RFC 2892, taken alone or in combination, neither teach nor suggest a method of initializing a node in a network including:

- . . . connecting the node to each of the first and second rings;
- determining a ring identifier for each of the first and second rings coupled to the node after connection;
- generating a ring query packet that includes a proposed ring identifier for one node . . . [and]
- determining routing decisions for one or more packets received at the node along each of the first and second rings using the ring identifier information.

as required by independent claim 16, and generally required by independent claim 26.

Regarding the claimed “connecting the node,” the Examiner merely refers to paragraph 0024 which has been quoted above. As noted above, Mor may disclose that nodes are connected by segments in a ring, but Mor neither teaches nor suggests the process of connecting the node to each of the first and second rings.

Regarding the claimed “determining a ring identifier,” the Examiner presents no specific argument, but as noted above the applicants respectfully submit that this limitation is neither taught nor suggested by Mor.

Regarding the claimed “generating a ring query packet that includes a proposed ring identifier for one node,” the Examiner refers to paragraph 0004 of Mor and states:

- . . . wherein the topology packet is the ring query packet that each node generate and send to each other nodes on one of the rings. Each topology packet includes a bit field for the ring identifier. (Office Action of October 19, 2004, p. 7, bottom)

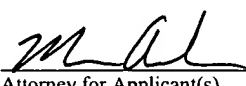
The applicants respectfully disagree. While Mor and RFC 2892 both refer to ring topology discovery techniques, neither teach nor suggest that the packet include a proposed ring identifier for one node, as required by the applicants claims. Moreover, the discussion of section 4.2.2 of RFC 2892 above makes clear that the bit described in that section does not satisfy the claim limitation.

Regarding the claimed "determining routing decisions," the Examiner refers to paragraph 0030 of Mor as quoted above. As noted above, although the cited portion of Mor describes, *inter alia*, building and using a routing table, the cited portion of Mor neither teaches nor suggests that the routing table uses the claimed ring identifier information.

Accordingly, independent claims 16 and 26 are allowable over Mor and RFC 2892.

Claims 2 and 3 depend from claim 1 and are allowable for at least this reason. Claims 5-15 depend from claim 4 and are allowable for at least this reason. Claims 17-24 depend from claim 16 and are allowable for at least this reason.

In view of the amendments and remarks set forth herein, the application is believed to be in condition for allowance and a notice to that effect is solicited. Nonetheless, should any issues remain that might be subject to resolution through a telephonic interview, the examiner is requested to telephone the undersigned.

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA, 22313-1450, on <u>Dec 1</u> , 2004.	
 Attorney for Applicant(s)	<u>12/1/04</u> Date of Signature

Respectfully submitted,



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